according to the office which organizes the issue, and will be designed to meet the different needs of the various services. This proposal, which was accepted by the conference, marks a great advance in international cooperation in all parts of the world. The conference also recorded its appreciation of the work performed on board the *Jacques Cartier*. This is a French ship which has made experiments during voyages between America and Europe of collecting meteorological information by wireless telegraphy from ships and shore, preparing a meteorological chart of the Atlantic, and then broadcasting forecasts for the use of ships. The *Jacques Cartier* carries an officer of the mercantile marine trained in the French Meteorological Office, who is assisted by a clerk lent by that office. Further developments along these lines are to be expected.

The power of the method of "correlation" when applied to meteorological data is now generally recognized by meteorologists. The success of Dr. G. T. Walker, who employs this method in his forecasts of the Indian monsoon, is well known. Such work, however, fails unless homogeneous data extending over a long period are available. Professor Exner, of Vienna, brought this matter before the conference, and a resolution was adopted expressing the opinion that the publication of long and homogeneous data from a number of stations at distances of about 500 or 1,000 kilometers from one another would be of great value. Not content with expressing this opinion, the conference asked Dr. G. T. Walker to supervise the working of the resolution so far as Asia is concerned, and similarly Prof. F. M. Exner for Europe, Mr. H. H. Clayton for America, and Dr. G. C. Simpson for Africa, Australia, and the ocean generally.

The conference was unable to solve the problem submitted to it by the commission for the upper air regarding the international publication of upper-air data. That these data should be collected and published in a uniform manner is highly desirable, but all the efforts of Sir Napier Shaw, the president of the commission, to find a possible way of doing so have been unavailing. Such an undertaking would be expensive and would require financial aid from all countries concerned. In present circumstances it is not surprising that such aid is not forthcoming, and all the conference could do was to make suggestions for meeting temporarily the pressing need for the rapid circulation of results obtained by means of sounding balloons. The data obtained by the use of airplanes and pilot balloons are too numerous to be handled internationally at present, and the conference therefore recommended that each country should publish its own data.

Many resolutions dealing with agricultural meteorology, terrestrial magnetism, atmospheric electricity, solar radiation, and the upper atmosphere were adopted but space does not allow of further details here.

One of the most important questions dealt with by the conference was its relationship to the International Union of Geodesy and Geophysics. The great growth of the official weather services of all civilized countries has provided so many questions of administration and organization for international consideration, that this side of the activities of the International Meteorological Organization has swamped the scientific side. At recent meetings of the conference and committee there has been no time for scientific discussion, and therefore little to attract the members of the organization other than those connected with the great official meteorological services. A resolution was therefore considered to alter the rules in such a way as to limit membership of the conference to directors of meteorological services. There was practically no opposition, and the rule governing the membership of the conference now reads as follows:

"The officers of the committee shall invite to the conference all heads of Réseaux of stations in each country which are official (d'état) and independent of one another."

It was generally understood that this would remove from the work of the organization all questions of pure science, and that the science of meteorology would be considered only in so far as it is applied to the needs of the meteorological services. Practically, this is no change in the work of the organization, but it makes a clear distinction between the sphere of the International Union of Geodesy and Geophysics and the sphere of the International Meteorological Organization. There should now be no material overlap between the work of the union, which considers meteorology from the scientific side, and the work of the organization, which "studies only those questions which are of interest to all national meteorological services and which necessitate the utilization of their own network of stations."

At the last meeting of the conference, when the new international meteorological committee had been elected and Sir Napier Shaw was about to terminate his long connection with international meteorology, Colonel Delcambre, the head of the French Meteorological Office, rose and in a short eloquent speech expressed the regard every member of the conference left for Sir Napier Shaw and the debt which meteorology owed to him. He then proposed that Sir Napier should be elected an honorary member of the international meteorological committee, an honor never before bestowed. The proposal was accepted with prolonged applause and much feeling, for all felt that this was a happy way of marking their appreciation of the great work done by Sir Napier Shaw for international meteorology.

The newly elected committee met the next day and appointed Professor van Everdingen president, and Doctor Hesselberg secretary. The office of vice president was left vacant for the present.

The general feeling at the end of the meetings, frequently expressed, was that good work had been done and much progress made. Good feeling between members from all countries was very marked throughout.

THE EAST-WEST OSCILLATION OF THE ICELANDIC MINIMUM.

By C. E. P. BROOKS, M. Sc.

[Abstracted from *Meteorological Magazine*, 174*, No. 692, September, 1923.]

The author has made an examination of 528 pressure charts especially drawn for the study and bases his conclusions upon the evidence of these charts. The charts were examined for cases of an extreme westerly position of the Icelandic minimum, say over Davis Strait and an extreme easterly position in which the minimum was centered over or to the east of Iceland. A scale of marking was adopted to show the position of the minimum for each month. As the work developed the month as a time unit was discarded in favor of overlapping means of 4 months. Plotting the scale values thus obtained the author found evidence of 43 complete oscillations with an average length of 12.1 months. The number of intervals between successive easterly and successive

westerly maxima were 86 and these were distributed as follows:

Length in months.	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Frequency.	3	3	1	7	8	8	11	13	7	3	5	4	6	1	2	2	2

There is in the above tabulation a well-marked crest at 11 to 12 months and a secondary crest at 15 to 17 months. The author believes the minimum at 14 months may have been accidental.

After eliminating the annual variation, a tendency for easterly or westerly maxima to recur at the same season in successive years is found. Thus from 1873 to 1883 the chief easterly maxima fell mainly between August and December and the westerly maxima between January and April and the same applies to the years 1889–1896, although the cycle in those years was not well pronounced. On the other hand, easterly maxima generally occurred in the early months and the westerly maxima in the later months from 1884 to 1888, 1897 to 1902, and 1910 to 1916.

Thus there seems to have been a more or less regular recurrence of the same phase of the cycle at about the same time in successive years, alternating with almost complete reversals.

The author suggests some form of seasonal control to account for this.

Earlier investigators of the subject, Meinardus [1] and Petersen,[2] developed the hypothesis of a "self-regulating mechanism" which depends for its operation upon the influence of the wind upon the flow of the warm Gulf Stream waters on the one hand and the cold waters of the Labrador Current on the other.

The time relation is too indefinite and the length of the period required to complete the cycle too variable for use in forecasting.—*A. J. H.*

[1] Meinardus, W.: Der Zusammenhang des Winterklimas im Mittel und Nordwest Europas mit dem Golfström. *Zs. Ges. Erdkunde*, Berlin, 1898, p. 95.
[2] Petersen, J.: Unperiodische Temperaturschwankung im Golfström und deren Beziehung zu der Luftdruckverteilung. *Ann. Hydrog.*, Berlin, 174*, 1910, p. 397.

ON THE FORMATION OF LOCAL DEPRESSIONS IN THE MEDITERRANEAN.

By E. G. MARIOLOPOULOS.

[Abstracted from *Comptes Rendus*, (Paris Acad.), October 1, 1923, pp. 597–600.]

Two types of barometric depression are distinguished in the Mediterranean region, those which are formed locally and those which are related to "families" of moving cyclones of the Northern Hemisphere. The first are usually of slight intensity and move very slowly, while the second type are usually intense and definitely related to the barometric activity over the Atlantic. The local depressions of the Mediterranean region show a line of temperature discontinuity in accordance with the Bjerknesian scheme of cyclonic structure. Temperatures in the cold portion are not uniform, but in the warm portion they are remarkably uniform. The author believes that actual "polar" and "equatorial" air are not essential to cyclonic formation, but that sufficient temperature inequality in opposing air currents can be produced by two adjacent anticyclones, in which case a depression is produced between them. The strong winter anticyclones of Asia and of the Atlantic provide opposing winds of contrasting temperature, which appear to cause the local depressions between them. In summer, when these anticyclones are not so strong and are differently located, such depressions do not form.—*C. L. M.*

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RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

C. FITZHUGH TALMAN, Meteorologist in Charge of Library.

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